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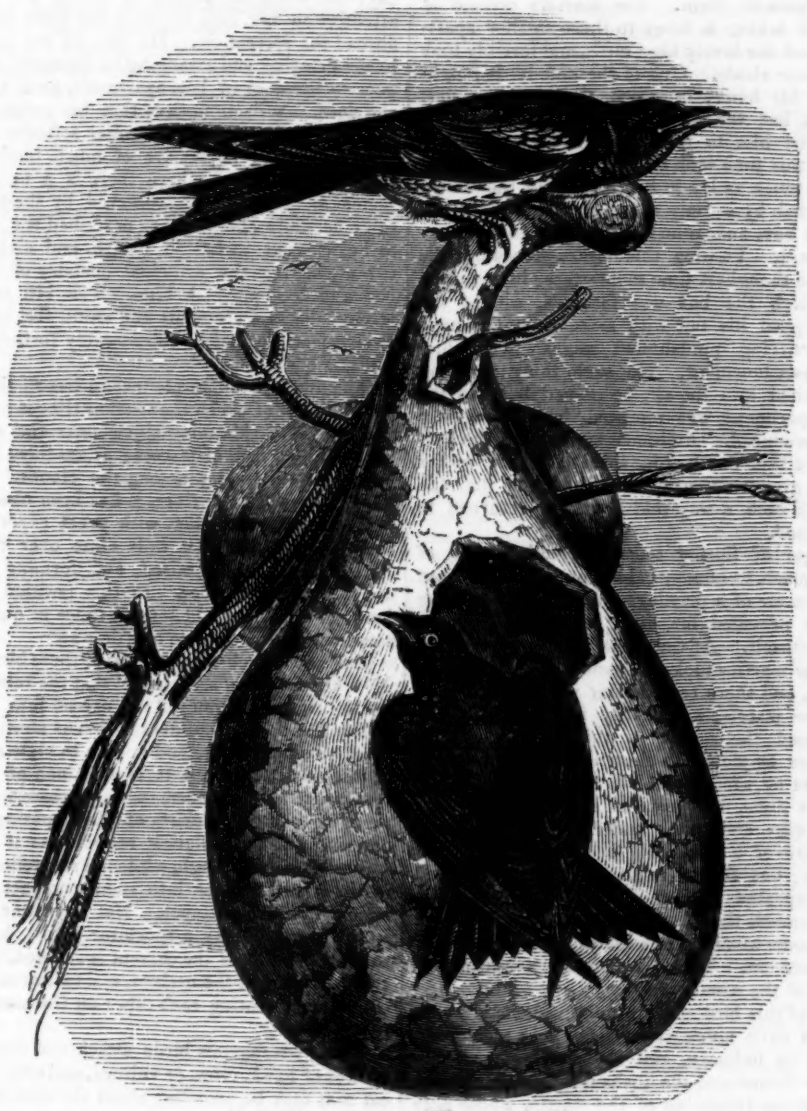
## THE PURPLE MARTIN.



MALE AND FEMALE. (*Nest, a Gourd.*)

With the inhabitants of the United States, the martin is a greater favourite than even with us. We all like to hear the twittering of the martin on the eaves of our houses, as he comes in the early Spring to seek a fit place for his nest, and many of us take a great interest in watching the proceedings of the bird, as he sets about his task with so much patience and ingenuity, working incessantly at those hours of the day, when his plaster-work will dry slowly, and give stability to the dwelling, and patiently waiting during the warmth of noon-tide, lest the work, drying too quickly, should be insecure, and crumble away. There is even a superstitious veneration for the bird in some parts of this country; the inmates of our cottages hail the arrival of the martin, and consider themselves lucky, if he chooses their roof for his abode, because they say, the house where the martin builds his nest will never be destroyed by fire.

But we are not aware, that regard for this bird has ever shown itself here, in the same way that it is manifested among our American brethren. Among them, not only are birds of a similar kind encouraged to build on the roofs of their dwellings, but all the cities are furnished with martin-boxes, or houses for their especial reception. These houses are held in a manner sacred, and it is very seldom that even lads, bent on mischief, think of disturbing the favoured martin. Almost every country-

tavern has one of these martin-boxes, fixed on the upper part of the sign board, and Audubon, the American ornithologist, says he has observed that the handsomer the box, the better does the inn generally prove to be.

This admirable writer gives an amusing instance of the pertinacity with which these birds maintain their rights, when they have once chosen a place to build in. He tells us that he had a large and commodious house built, and fixed on a pole, for the reception of martins, in an inclosure near his house, where for some years several pairs reared their young. One winter he also put up some smaller boxes, with a view to invite blue-birds to build nests in them. The martins arrived in the Spring, and taking a fancy to these smaller apartments, turned out the lovely blue-birds, and forcibly took possession of their abode. One of the blue-birds fought vigorously for his home, in which there was a nest nearly finished, but the more powerful blows of the martin compelled him to give way. The vanquished blue-bird from this time took every opportunity to annoy the usurper, as much as lay in his power, but the martin was little affected by it, only showing his head at the entrance of the box, and retorting with accents of exultation and insult. Viewing this unjust procedure, the owner of the box thought it time to interfere; he mounted the tree to which the box was fastened, caught the martin, and clipped his tail with scissors, in the hope that such mortifying punishment might make him retreat to his own tenement. No such thing; as soon as he was launched into the air, he rushed back to the box. The experiment was repeated, but the desired effect was not produced. Audubon seeing that the pertinacious martin kept the box in spite of all his wishes that he should give it up, seized him in anger and disposed of him in such a way that he never returned to the neighbourhood.

This harbinger of Spring seems perfectly devoid of fear in his approach to human habitations; he sets about his nest with the air of a privileged bird, and if no fitting habitations are provided for him, he is not long in providing for himself. At the house of a gentleman of Louisiana, some martins took possession of sundry holes in the cornices, and there reared their young for several years, until the insects, which they introduced to the dwelling, induced the owner to think of a reform. Carpenters were employed to clean the place, and close up the apertures by which the birds entered the cornice. When this was done, the martins seemed in despair: they brought twigs and other materials, and began to form nests wherever a hole could be found in any part of the building; but they were so perseveringly chased off, that after repeated attempts, the season being in the mean time advanced, they were forced away, and betook themselves to some woodpecker's holes, on the dead trees about the plantation. The next Spring a house was built for them in the usual manner.

The arrival of this bird appears to be welcomed by all classes, and his early notes, though not very melodious, are the signal to industry, and the harbinger of fine weather. The farmer and the husbandman rise to renew their labours at the twittering of the martin, whose note is heard before that of all other birds. According to Audubon, the Indian is also fond of the martin's company, and hangs up a calabash on some twig near his camp, and in this cradle the bird keeps watch, and sallies forth to drive off the vulture that might otherwise commit depredations on the deer skins, or pieces of venison exposed to the air to be dried. The humbled slave of the Southern States takes pains to accommodate this favourite bird.

The calabash is neatly scooped out, and attached to the flexible top of a cane, brought from the swamp, where that plant usually grows, and placed close to his hut. It is alas! to him a mere memento of the freedom which he once enjoyed; and, at the sound of the horn which calls him to his labour, as he bids farewell to the martin, he cannot help thinking how happy he should be, were he permitted to gambol and enjoy himself day after day, with as much liberty as that bird.

The purple martin begins to prepare its nest about the middle, or twentieth of April. The materials are generally dry leaves, slender straws, hay, and feathers in considerable quantity. The eggs are from four to six, and of a pure white. Two broods appear during the season: the first in May, the second late in July. While the female is laying, and before incubation commences, both birds are away from the nest the greater part of the day; but when the female is sitting, the male is very attentive to her, and occupies her place when she goes abroad for recreation. He sits on the outside of the house dressing and arranging his plumage, but frequently goes to the door of her apartment, as if to inquire how she does. Wilson notices that his notes seem at this time to have assumed a peculiar softness, and his congratulations are expressive of much tenderness. Conjugal fidelity, even where there is a number together, seems to be faithfully preserved by these birds. The same accurate observer has described the purple martin as being eight inches in length, and sixteen inches in extent, having the principal portions of his body of a rich and deep purplish blue. The bill of this bird is strong, the legs are short and stout, the tail consists of twelve feathers and is considerably forked, the eyes are full and dark.

The flight of the purple martin has all the gracefulness and rapidity for which the swallow tribe is remarkable. At one time it is skimming along near the surface of the ground, in search of insects; at another, it is mounting aloft, and disporting among the clouds. When flying over a large lake or river, it has been observed to bathe and drink on the wing, with great expertness. When intending to drink, it sails close over the water, with both wings greatly raised, and forming a very acute angle with each other. In this position it lowers the head, and dips the bill several times in quick succession, swallowing at each time a little water.

Audubon watched the arrival of these birds at the city of New Orleans, and ascertained that the rate of their flight during this migration did not exceed four miles an hour. When the flock encounters a violent storm of wind, they meet it courageously, and appear to slide along the edges of the gust, so as not to lose an inch of ground. The foremost front the storm with pertinacity, ascending or plunging along the skirts of the opposing currents, and entering their undulating recesses, as if determined to force their way through, while the rest follow close behind, all huddled together into such compact masses, as to appear like a black spot. Not a twitter is then to be heard from them by a spectator below, but the instant the farther edge of the current is doubled, they relax their efforts to refresh themselves, and twitter in united accord, as if congratulating each other on the successful issue of the contest.

These courageous birds attack and drive away every species of hawk, crow, or vulture, and even chase away the cat that may be prowling about the roof in search of the young birds. In consequence of their attacks on birds of prey, and also on numerous insects, among which are even large beetles, the purple martin is a welcome visitant to the lands of the American farmer.

It is on this account, doubtless, that such pains are taken for the accommodation of these birds; so that while the wealthier classes provide handsome boxes for their reception at the nesting time, the poor slave will also scoop out the middle of a gourd, and hang it up near his dwelling, to entice the approach of the bold and insect-loving martin. A nest thus prepared forms the subject of our illustration.

## HISTORY OF Mr. READ, AND HIS INVENTION OF THE STOMACH-PUMP.

Early before breakfast, a gardener of the name of Read, in the service of Dr. Marriot, a clergyman in Kent, called to see Sir Astley Cooper. He had contrived an instrument which he thought would be beneficial in removing poison from the stomach, and not meeting with any encouragement from the surgeons in his own neighbourhood, had determined to show it to Sir Astley. He was at once introduced to him, and having explained the object of his visit, and the nature of his invention, he handed him a syringe, to which a long elastic tube was attached. Taking it in his hand, Sir Astley regarded it for some moments with attention, moved the piston up and down, and then said, "Well, but what is this for? how do you use it?" Mr. Read explained, that the elastic tube was to be passed down into the stomach, and that by means of the piston and certain spherical valves which he pointed out, any fluid could be easily injected into or removed from that organ.

Sir Astley's instant conviction of the usefulness of this contrivance was remarkable, and formed a singular contrast with the ridicule with which it had been assailed by others. His curiosity, when once excited by any object, was never satisfied until he had made himself perfectly familiar with all the circumstances in detail. "Come," said he, placing his hand on his humble friend's shoulder, a favourite action with him when pleased with any one, "come up stairs, and have some breakfast; we must have some more talk about this."

Mr. Read was accordingly introduced to the ladies, and during the meal the conversation turned on the new invention, and Mr. Read's various occupations in the country. His active genius and acute perception were brought out by the pointed remarks and questions of Sir Astley, and the visit of the gardener was not soon forgotten.

After breakfast Sir Astley took Mr. Read into a private room, and remained closeted with him for two hours. He made him relate his history, the circumstances which led to his invention, and then entered into a long conversation respecting the science of hydraulics, with which Mr. Read had made himself familiar. The great interest Sir Astley took in testing the value of this important professional instrument, the peculiar genius of its inventor, and the humble position in life from which he has honourably raised himself, make these circumstances worthy of being recorded. They will place him, in the history of science, in the list of those who, in spite of the depressing circumstances of deficient education and obscure rank, have emerged by their own exertions from their position, and forced themselves into notice.

Mr. Read's history of himself was this: His father had been a farmer in Kent, and he had been educated to follow the same occupation; but the employment proved exceedingly irksome to him. As a child, he had displayed the greatest delight in mechanical contrivances; and while engaged in farming, always devoted his leisure hours to indulging his taste for this favourite pursuit, and, indeed, turned it to a profitable account. He was a great reader, and made himself well acquainted with history and general science. At the age of twenty-two, he left his father's farm, and became bailiff to a gentleman farmer in the parish of Horsemunden in Kent. He remained with him three years, and then determined to leave his native place, and seek employment abroad. Dr. Marriot, the clergyman of the parish, hearing of his intention, and being well aware of his talents and general good conduct, made him the offer of placing under his superintendence the laying out and arranging of the gardens of an estate, which had lately devolved on him. This offer Mr. Read accepted; and one day, while pondering over the means of distributing some water in a certain direction, Dr. Marriot sent him the part of a Cyclopædia which treated on "Hydrostatics." His interest was at once excited, and he determined thoroughly to peruse the article, and after immense labour and expenditure of time succeeded in making himself master of its contents.

Mr. Read's perseverance and success in the management of gardens pleased Dr. Marriot so much, that he gave him access to his library whenever he thought proper, during leisure hours. Mr. Read availed himself of this permission, and often sat up the whole night engaged in study. Here he found a large volume of anatomical plates; and led on by the laudable curiosity to understand the construction of his own frame, he studied these with such diligence, that he soon acquired a tolerable knowledge of anatomy. But he chiefly devoted his attention to the science of hydraulics; and although he found the technical expressions and descriptions for some time to be a bar to his progress, by dint of perseverance and earnest attention he overcame all difficulties, and after a few years obtained as perfect a knowledge of the science as the opportunities open to him allowed. While thus industriously engaged, his inventive genius displayed itself in an important improvement which he effected in the engine usually employed for watering the garden; and the alteration which he made has been in use ever since.

Some few years afterwards, on the occasion of the death of one of Dr. Marriot's domestics, Mr. Read suggested to Dr. Wilmot, the physician in attendance, the application of the instrument he had invented for the relief of the disease which had destroyed his patient. Dr. Marriot saw its application, and suggested some improvements which Read constructed according to the Doctor's design. This apparatus was submitted to the inspection of the Council of the College of Surgeons, and highly appoved of. It then occurred to Read that it might be adapted to the purpose of removing poisonous fluids from the stomach; but the ridicule which this proposition brought upon him, checked for a time his ardour. In the year 1822, the death of the Bishop of Armagh, from taking laudanum by mistake, again directed Read's attention to the subject, and he determined to put his project to the test. The fame of Sir Astley Cooper, together with the cool reception his views had met from members of the profession in the country, induced him to show it to him as soon as it was finished.

His judgment in taking this step did not mislead him. As soon as Sir Astley Cooper had heard these particulars, he determined at once to test the utility of the instrument by experiment; and in order to give publicity to the result, appointed Mr. Read to meet him at Guy's Hospital in the afternoon. No dog or other animal suited to his purpose could be obtained that day; but on the following, the opportunity offered. Accordingly, in one of the theatres of the hospital, a dog was made to swallow a large quantity of opium; and so soon as the poison had produced its deleterious influence the instrument was used. It was found perfectly to fulfil its intention; and the animal recovered. Sir Astley then explained the mechanism of the apparatus to the class, and, shaking Mr. Read by the hand, said that his invention was of the greatest value, no less to the profession than to humanity at large; and observed that had he lived in ancient Greece he would undoubtedly have been crowned with laurel.

Sir Astley spoke of the instrument in his surgical lectures in the following manner. "It enables us not merely to remove the poison from the stomach, but to throw in water in considerable quantities; and to introduce stimulating remedies after the opium is removed, for the purpose of restoring the functions of the nervous system; and this under circumstances where emetics cannot be even swallowed. I certainly do expect the happiest results in such cases from the invention of this instrument. The man who first suggested such an idea deserves well of his country, and they who oppose it until the instrument has been fairly tried, must be destitute of understanding. Persons who object to a proposition merely because it is new, or who endeavour to detract from the merit of the man who proves the value of his invention by demonstrating its usefulness and applicability, are foolish, unmanly, envious, and illiberal objectors; they are unworthy of the designation either of professional men, or of men of science."

The use of this instrument has long since justified the high expectations respecting it of Sir Astley Cooper.—*Life of Sir Astley Cooper.*

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There is in the consciousness of every man a deep impression of continued existence. The casuist may reason against it till he bewilder himself in his own sophistries; but a voice within gives the lie to his vain speculations, and pleads with authority for a life which is to come. The sincere and humble inquirer cherishes the impression, while he seeks for further light on a subject so momentous; and he thus receives, with absolute conviction, the truth which beams upon him from the revelation of God,—that the mysterious part of his being, which thinks, and wills, and reasons, shall indeed survive the wreck of its mortal tenement, and is destined for immortality.—Abercrombie.

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## EASY LESSONS ON REASONING.

### Lesson V.

§ 1 We have seen that in every Proposition there is something that is spoken of; which is called the Subject; and something that you affirm or deny of it; which is called the Predicate. And it is evidently of great importance to understand and express clearly, in each Proposition, whether the Predicate is said of the *whole* of the Subject, or only of *part* of it:—in other words, whether it is *predicated* "*universally*," or "*particularly*." ["*partially*"]

If, for instance, I say, or am understood to imply, that "*all* testimony is unworthy of credit," this is a very different assertion from saying or implying, merely that "*some* testimony is unworthy of credit. The former of these is called a "*Universal*" Proposition; the Subject of it being *taken universally*, as standing for *anything and everything* that the Term is capable of being applied to in the same sense. And a Term so taken is said (in technical language) to be "*distributed*." The latter of the two is called a "*Particular Proposition;*" the Subject being *taken particularly*, as standing only for *part* of the things signified by it: and the Term is then said to be "*undistributed*."

The technical word "distributed" (meaning what some writers express by the phrase "taken universally") is used, as you perceive, in a sense far removed from what it bears in ordinary language. But,—for that very reason,—it is the less likely to lead to mistakes and confusion. And when once its technical sense is explained, it is easily remembered. When I say "birds come from eggs," and again "birds sing" I mean, in the former proposition, "all birds;" [or "every bird"] in the latter proposition I mean, not, "*all*" but "*some*" birds. In the former case the term "birds" is said to be "distributed;" in the latter, "undistributed." You must be careful also to keep in mind the technical sense (already explained) of the word "*particular*." In ordinary discourse, we often speak of "this *particular* person" or thing; meaning "this *individual*." But the technical sense is different. If I say "this city is large" the Proposition is not "Particular," but is equivalent to a *Universal;* since I am speaking of the *whole* of the Subject; which is, "*this single city*." But "*some* city is large" or, "some cities are large" is a particular proposition; because the Subject, "*city*," is taken not *universally*, but *partially*.

The distinction between a "Universal" proposition and a "Particular" is (as I have said) very important in Reasoning; because, as has been already remarked, altho' what is said of the *whole* of a Class may be said of anything contained in that Class, the Rule does not apply when something is said merely of *part* of a Class. (see the example "X is Y" in § 3. of the preceding Lesson)

§ 2. You will have seen that in some of the foregoing examples, the words "all," "every," or "any," which are used to denote the distribution of a Subject, and again "some," which denotes its non-distribution, are not *expressed*. They are often *understood*, and left to be supplied in the reader's or hearer's mind. Thus, in the last example, "birds sing," evidently means "*some* birds;" and "man is mortal" would be understood to mean "*every* man."

A Proposition thus expressed, is called "*Indefinite;*" it being left *undetermined* ["undefined"] by the form of expression, whether it is to be considered as Universal or as Particular. And mistakes as to this point will often give a plausible air to fallacies; such as that in the last Lesson (§ 4.) respecting "Testimony."

But it is plain that every Proposition must in reality *be* either Universal or Particular; [that is, must have its Subject intended to be understood as distributed, or, as not distributed] tho' we may not be told *which* of the two is meant.

And this is called in technical language, the distinction of Propositions according to their "Quantity;" namely into Universal and Particular. "Every X is Y" and "some X is Y," are propositions differing from each other in their "quantity," and in nothing else.

§ 3. But the *Predicate* of a proposition, you may observe, has no such sign as "all" or "some," affixed to it, which denote, when affixed to the *Subject*, the distribution or non-distribution of that term. And yet it is plain that each Term of a proposition,—whether Subject or Predicate—must always be meant to stand either for the whole, or for part, of what is signified by it;—in other words,—must really *be* either distributed or undistributed. But this depends, in the case of the Predicate, not on the "quantity" of the proposition, but on what is called its "*Quality;*" that is, its being *Affirmative* or *Negative*. And the invariable rule (which will be explained presently) is, that the Predicate of a Negative-proposition is distributed, and the Predicate of an Affirmative, undistributed.

When I say "X is Y" the term "Y" is considered as standing for *part* of the things to which it is applicable; in other words, is undistributed. And it makes no difference as to this point whether I say "*all* X," or "*some* X is Y." The *Predicate* is equally undistributed in both cases; the only thing denoted by the signs "all" or "some," being the distribution or non-distribution of the *Subject*.

If, on the other hand, I say "X is not Y." whether meaning that "*No* X is Y," or, that "*some* X is not Y," in either case, "Y" is distributed.

§ 4. The reason of this rule you will understand, by considering, that a Term which may with truth be affirmed of some other, may be such as would *also* apply equally well, and in the same sense, to *something else besides* that other. Thus, it is true that "all iron is a metal," altho' the term "metal" is equally applicable to gold, copper, &c., so that you could not say with truth that "all metal is iron," or that "iron, *and that only*, is a metal." For the term "iron" is of narrower extent than the term "metal" which is affirmed of it.

So that, in the above proposition, what we have been comparing, are, the *whole* of the term "iron," and *part* of the term "metal;" which latter term, consequently, is undistributed.

And this explanation applies to every affirmative proposition. For tho' it *may so happen* that the Subject and the Predicate may be of equal extent [or "*equivalent*," or, as some express it, "convertible"], so that the Predicate which is affirmed of that Subject could *not* have been affirmed of *anything else*, this is not *implied in the expression* of the proposition itself.

In the assertions, for instance, that "every equilateral triangle is equiangular," and that "any two triangles which have all the sides of one equal to all the sides of the other, each to each, are of equal areas," it is not implied that "every equiangular triangle is equilateral," or that "any two triangles of equal areas have their respective sides equal." This latter indeed is not *true:* the one preceding it *is* true; that is, it is true that "every equiangular triangle is equilateral," as well as that "every equilateral triangle is equiangular:" but these are *two* distinct propositions, and are separately proved in treatises of Geometry,

If it happen to be my object to assert that the Predicate as well as the Subject of a certain affirmative proposition is to be understood as distributed—and if I say, for instance "all equilateral triangles, *and no others*, are equiangular,"—I am asserting, in reality, not *one* proposition merely, but *two*. And this is the case whenever the proposition I state is understood (whether from the meaning of the words employed, or from the general drift of the discourse) to imply that the whole of the Predicate is meant to be affirmed of the Subject.

Thus, if I say of one number—suppose 100—that it

is the Square of another, as 10, then, this is understood by every one, from his *knowledge of the nature of numbers*, to imply, what are, in reality, the *two* propositions, that "100 is the Square of 10," and also that "the Square of 10 is 100."

Terms thus related to each other are called in technical language, "*convertible*" [or, "equivalent"] terms. But then, you are to observe that when you not only affirm one term of another, but also affirm (or imply) that these *are* "*convertible*" terms, you are making not merely *one* assertion, but *two*.

§ 5. It appears then that in affirming that "X is Y," I assert merely that "Y"—*either* the *whole* of it, or *part, (it is not declared, which)* is applicable to "X;" [or "comprehends," or "contains" X]. Consequently, if *any part* of a certain Predicate be applicable to the Subject, it must be affirmed,—and of course *cannot be denied*—of that Subject. To *deny* therefore the Predicate of the Subject, must imply that *no part* of the Predicate is applicable to that Subject; in short that the *whole* Predicate is denied of that Subject.

You may thus perceive that to assert that "X is *not* Y" is to say that *no part* of the term "Y" is applicable to "X:" (for if *any* part *were* applicable, "Y" could be *affirmed*, and not denied, of "X") in other words, that the *whole* of "Y" is denied of "X;" and that consequently "Y" is "distributed." When I say, for instance "All the men found on that island are sailors of the ship that was wrecked there," this might be equally true whether the whole crew, or only some of them, were saved on the island. To say therefore that "the men found on that island are *not* sailors of the ship &c." would be to *deny that any part* of that crew are there; in short, it would be to say that the whole of that Predicate is *in*applicable to that subject.

§ 6. And this holds good equally whether the negative proposition be "universal" or "particular." For to say that "Some X is not Y" (or—which is the same in sense—that "All X is not Y") is to imply that there is *no part* of the term "Y" [no part of the class which "Y" stands *for*] that is applicable to the *whole without exception*, of the term "X;"—in short, that there is *some part* of the term "X" to which "Y" is wholly inapplicable.

Thus, if I say, "some of the men found on that island are not sailors of the ship that was wrecked there," or, in other words, "the men found on that island are *not, all of them*, sailors of the ship &c." I imply that the term "sailors &c." is *wholly* inapplicable to *some* of the "men on the island;" tho' it might perhaps be applicable to others of them.

Again if I say "some coin is made of silver," and "some coin is not made of silver," (or in other words, that "all coin is not made of silver") in the former of these propositions I imply, that in *some portion* (at least) of the Class of "things made of silver," is found [or comprehended] "some coin:" in the latter proposition I imply that there is "some coin" which is contained in *no* portion of the Class of "things made of silver;" or (in other words) which is *excluded* from the *whole* of that Class. So that the term "made of silver" is distributed in this latter proposition, and not, in the former.

Hence may be understood the Rule above given, that in all Affirmative-propositions the Predicate is undistributed, and in all Negative-propositions, is distributed.

The Subject is, as we have seen above, distributed, in a Universal-proposition (whether affirmative or negative) and not, in a Particular. So that the distribution or non-distribution of the *Subject* depends on the "*Quantity*" of the proposition, and that of the *Predicate* on the "Quality."

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## LETTERS TO THE READER.

### No. VII.

MY DEAR READER,

You will remember that the sufferings of our mining and manufacturing children, in respect of employment, food, clothing, &c., formed the subject of my last letter (*Saturday Magazine*, April 8th). To complete this investigation into the condition of our little fellow-country-people, it will be necessary to see what effects these causes are likely to produce upon them in after life, as well as to inquire into the mental and moral relationship which they bear to the civilization and religion of our age and country.

*The Physical prospects* of the children are in exact correspondence to their bodily treatment. By their employment at tender ages, the growth of the body is retarded, and the period of childhood protracted. The period intervening between adult age and decrepitude—that is, while the physical, intellectual, and moral powers of the man are in full vigour—is abridged. Manhood is shortened, and the age of helplessness and death anticipated. Underground labour is a deprivation of solar light which alone can perfect the process of nutrition. This function being depressed, the organic frame is never well-developed. In South Wales the children of the miners get pale in their looks, and weak in their limbs. An unnatural projection of the chest-bones, and a sinking in of the spine, is common to those who work the smaller seams of coal. A crippled gait, often connected with positive deformity, frequently comes upon the infant miner.

An extraordinary development of the muscular system is produced by colliery labour. This, instead of being an indication of sound and robust health, is really a proof that the general system is starved by the over-nourishment of one particular part of it. That the constitution is really weakened by this undue expenditure of nutriment upon muscles, is proved by the fact that the other parts are stunted, and also by the early death of the collier. It is rare to see a collier able to follow his calling beyond the age of forty or fifty. In a population of 1000, says the rector of Begelly, South Wales, there are not six colliers sixty years of age.

The positive diseases produced by this employment result, partly from early and over-exertion, and partly from deficient ventilation and drainage of the mines. The lungs, heart, glands, and joints, suffer most. Of the affections of the lungs, asthma is the most frequent:—'Father cannot labour much,' said a poor Scotch boy, 'as he is nearly done in the breath. Mother is clean done for; she can hardly breathe, and has not worked for some years.'

In consequence of imperfect ventilation, the air of coal mines, which is commonly breathed during twelve out of twenty-four hours, does not contain sufficient oxygen to decarbonize the blood. Hence the blood becomes over-charged with that noxious ingredient (carbon) from which it is the main purpose of respiration to purify it. Lamp smoke likewise adds to the quantity of atmospheric carbon. Blasts with gunpowder produce irritating and deleterious gases. The delicate structure of the lungs becomes infiltrated with carbonaceous matter, the consequence of which, to the older colliers, is a fatal asthma, called by them the "black spit." Consumption, also, is frequent amongst the mining population. Exposure to cold and damp causes painful affections of the muscles, ligaments, and joints. The combined operation of these various causes sends the miner to comparatively an early grave.

The soil and dwellings of the workmen of Birmingham, I have said, are good. The clothing and food of the children, miserable; hence is partly to be attributed the fact, that half of the total number of deaths in that city are those of children under five years of age. At Wolverhampton and Willenhall the children employed in

the manufacture of metal wares are stunted, and frequently deformed. At the latter place the constable says there are examples without number of deformed men and boys, hump-backed, and knock-kneed. At Warrington a private of the 12th Lancers, recruiting for service, could not enlist a single man of sufficient height, although many offered. The children of Warrington are poorly fed and clothed, and work in ill ventilated and crowded rooms. They are, therefore, stunted.

In Bucks, and some of the neighbouring counties, numbers of young children are kept during the day in small, crowded, ill-ventilated cottages, stooping over their lace pillows. Some girls wear a strong wooden busk to prevent the stooping, which only adds indigestion to the most common and mortal disease of their occupation, namely, consumption. With the single exception of the Sheffield dry-grinder, no employment entails so fearful a catalogue of distressing and frequently fatal maladies, as that of milliners and dress-makers.

The MENTAL CONDITION of a large proportion of these children and young persons can, alas! be stated in a few words. At Bilston, with a population of 20,000, there are only four day-schools. In South Staffordshire generally, there is no provision for a quarter of the uneducated youth. The constant return from the Derbyshire coal-mines is, "no school, no reading room, nor anything of the sort connected with these coal-works." Out of 219 children and young persons examined at the bottom of one of the coal-pits near Halifax, only thirty-one could read an easy book, and not more than fifteen could write their names. Oldham and its vicinity contains upwards of 100,000 inhabitants; yet it has only one public day-school for the labouring classes, except an infant-school. The Report goes on to say, that in North Lancashire the intellects of the young colliers are as little enlightened as their places of work—"darkness reigns throughout."

*Numbers.* Children were found ignorant of the lowest calculations. "I cannot tell how many days in the year. I cannot tell how many weeks in a year," answered a boy at Durham. There are grown up men in Lancashire who cannot reckon the wages they receive. One young person, seventeen years old, working at Wolverhampton, did not know how many two and two made, nor how many farthings there were in two-pence, even when the money was placed in his hand. Another lad, at the same place, could not tell how many twice two made; nor how much money four farthings made; another, aged seventeen, said that seventeen farthings made ten-pence half-penny; another, aged sixteen, being asked how many ounces were in a pound, said "he was no judge o' nothing."

*Places.* Few children in the county of Durham, who worked in the mines, had ever heard of such places as Birmingham, or Manchester, or Liverpool, and as few in Staffordshire had ever heard of Durham, or Newcastle. One child had never heard of France, or Scotland, or Ireland, nor did he know what America was. Another, a Lancashire boy, eleven years old, had never heard of London. A Wolverhampton boy, also, had never heard of London, nor of Willenhall, which is only three miles distant from, and in constant communication with, Wolverhampton.

*Persons.* James Taylor, in Lancashire, "had heard of the Queen, but dunnot know who *he* is." Other children had never heard the name of Her Majesty, nor of Wellington, Nelson, Buonaparte, &c. It is to be especially remarked that, among all those who had never heard of such names as St. Paul, Moses, or Solomon, there was a general knowledge of the characters and course of life of certain infamous highwaymen.

*Christianity.* The foregoing facts will have prepared you for an equal ignorance upon sacred subjects. The majority of the collier children in Yorkshire are in a state of heathenism. They exhibit a picture of moral and mental darkness, which must excite grief in every Christian mind. A boy in Lancashire said that he had never heard of Jesus Christ. He confessed, indeed, that he had heard of God, but only from the desecration of His name. Three girls, all employed in the pits, of the ages of sixteen, fifteen, and eleven, declared that they had no knowledge even of the existence of a Saviour. A girl of eighteen years of age, in Yorkshire, said, "I never learnt nought. I never go to church or chapel. I never heard that a good man came into the world, who was God's Son, to save sinners. I never heard of Christ at all. Nobody has ever told me about Him; nor have my father and mother ever taught me to pray. I know no prayer. I never pray. I have been taught nothing about such things."

The MORAL CONDITION of childhood is, almost in every instance, the consequence of the relations that surround it. The earliest of these is,—

*Parents.* The ease with which parents are now enabled to rid themselves of the burden of their children's support, by drafting them into mines, and manufactures, weakens all parental and domestic ties, and puts a stop to progress in moral habits. There are hundreds of men in Birmingham who are supported in idleness by the earnings of their wives and children. This reversal of the laws of nature, decides the moral degradation of the offspring. Filial affection is soon worn out. Brothers and sisters are separated at an early age,—go to different kinds of work,—and soon lose all mutual interest, if any had existed. Instead of pious and intelligent parents to watch over their dawning faculties, and to preserve them, soul and body, from the contamination of the world, they have,—

*Companions*, and what companions? The most dissolute, the most depraved, awfully ignorant, and scarcely retaining the mental and moral attributes of man. "These tend to destroy all delicacy, love of truth, in fact, the whole circle of moral virtues, by poisoning every principle in the bud,—supposing the poor child to have ever had one seed previously sown in its breast which had found time to take root sufficiently to put forth a bud." What kind of subjects is such a community likely to become to the—

*Government* of the country? Insubordination to parental authority leads to insubordination to all authority. The morals of the collier children in Durham and Northumberland, "are bad, their education worse, their intellect very much debased, and their carelessness, irreligion, and immorality" are frightful. The ministers of religion declare that the country will be "inevitably ruined unless some steps are taken for securing a full education to the children of the working classes." Vice is contagious, and crimes of no ordinary description have been planned by the neglected population of the mines. The outbreaks, which have occurred in recent times, are the natural consequences of the possession, by childhood, of liberty unrestrained by friend, or parent, at an age when few are capable of self-government; and, also, of the utter absence of external means of education. Educated, in truth, they are; but it is by bad companions to crime and violence.

*Religious institutions.* In Cumberland not more than one fifth of the collier families attend public worship regularly.

A great number of children employed in labour attend no school at all, nor any place of worship. One child complained "he never went to school, feel t' want of that; *it is a sad letting down to a man.*" The excessive physical fatigue of the week-days makes any mental or religious instruction irksome to the children. "I go," says one, "to Sunday-school sometimes *when I am driven.*" "I do not go to church or chapel," says another, adding "we are worked too hard for that."

The mining children are, therefore, necessarily growing up in a state of absolute and appalling ignorance.

An act of worship is nearly as strange to them as to a Hottentot unenlightened by Christianity. Respecting the state of manufacturing children in the neighbourhood of Wolverhampton, it is observed that a lower condition of morals could not be found; "moral feelings and sentiments do not exist among them. *They have no morals.*"

These are the prominent evils which the Report contains. As there are physical, and mental, and moral evils, so must there be physical, and mental, and moral remedies. Infant slavery will be abolished: the daily labour of childhood must be shortened, and each be taught the duties which he owes to himself, to his fellow creatures, and his God.

In conclusion, I would observe that many of the evils above described, may be beyond yours or my own observation and control; but this by no means rids us of the responsibility of reflecting upon their causes. The remedies of social evils and the removal of their causes include a knowledge of the FIRST PRINCIPLES of science and of Christian action. These principles are as applicable to the improvement of ourselves, our children, and the fellow creatures who more immediately surround us, as of the neglected orphans of a colliery, or the natives of uncivilized lands. For, being every one of us created after the same pattern, our bodily organs are, when placed under the same conditions, reduced to similar diseases; our minds, but for instruction, are alike dark with ignorance and error: above all, our moral or spiritual characters are equally defaced by selfishness towards others, and indulgence to ourselves, unless we are animated with a generous spirit of good will and peace, which is the spirit of our holy religion.

Hence it follows that we cannot sincerely set about to raise the health, intelligence, and piety of those around us, without at the same time increasing the health, intelligence, and piety of ourselves and homes. The purity of air which we insure by ventilation and drainage, is a benefit to our neighbour; the intelligence which works out this and numerous other domestic duties, will likewise enable him to become a centre of health and usefulness to ourselves; the heart of love which extends these blessings to the poorest, not only multiplies the amount of human happiness, but disarms the violent, and adds strength to our national affection. The seeds of love will bear the fruits of peace. Loving man, we no longer need to fear him. Caring for him whom we have seen, will also prepare the soul for regarding in a fitter spirit his invisible Creator. Heaven would then surround us not only in our infancy, but through manhood, onwards. Our religion would consist of actions—in a cheerful going about to *do* good. Dissentions about words would cease.

That you may have a hand, and not a hand only, but a head and heart also, in this good work, and may live to enjoy the fruits of an intelligent affection, is the prayer of your sincere friend, F.

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## QUEEN ELEANOR'S CROSSES.

### V.

THE cross represented on the following page is now no longer in existence; but as engravings of it remain to the present day we have thought it right to give our readers an opportunity of marking the features of this last of the memorials, which, according to the order of the funeral progress, were raised by Edward I., in remembrance of his beloved queen, Eleanor of Castile. It was originally a beautiful piece of workmanship; but suffered much by repairs and alterations. The notice of this structure which we find in STOWE'S *Survey of London* is as follows:—

Charing Cross builded of stone, was of old time a faire piece of work, there made by command of Edward I., in the 21st year of his reign, in memory of Eleanor, his deceased queene.

The same writer tells us that the cross stood in the centre of the three streets, having

on the west St. James's Hospital, now occupied by St. James's palace and park; on the south, on the right hand, the Tilt-yard, and on the left hand a space, now called Scotland yard, formerly occupied by buildings for the receipt of the kings of Scotland and other estates of that country.

The situation occupied by this cross was in fact the same as that in which the statue of Charles I. now stands, and was perhaps one of the best which could have been chosen for a public memorial of this kind. This tribute to the faithful Eleanora was not, however, suffered to remain. In the civil wars of the reign of Charles I. it was destroyed by the frantic populace, as a remnant of superstition too leniently spared by time.

With respect to the term *Charing* Cross, we have some interesting remarks to show that it is probably no more than a corruption of the term *chère reine* which Edward, as we have already stated, was accustomed to bestow on his beloved Eleanora. These remarks are taken from STRICKLAND'S *Lives of the Queens of England.*

Of all the crosses raised to the memory of Eleanora of Castile, by her sorrowing widower, that of Charing is the most frequently named by the inhabitants of the metropolis, although the structure itself has vanished from the face of the earth. Yet every time Charing Cross is mentioned, a tribute is paid unconsciously to the virtues of Edward the First's beloved queen, for the appellation is derived from the king's own lips, who always spoke of her in his French dialect as the *chère reine.* Thus the words Charing Cross signify the "dear queen's cross," an object which was always seen by the royal widower in his egress and regress from his palace of Westminster. This anecdote is corroborated by Edward's personal habits, who certainly, like his ancestors, spoke French in his familiar intercourse. Our sovereigns had not yet adopted English as their mother tongue. Athough Edward and his father spoke English readily yet their conversation in domestic life was chiefly carried on in French.

The exact place at which Queen Eleanora died has been questioned. It is generally supposed that the sad event took place in Lincolnshire; but the village expressly mentioned by Walsingham is not in that county, though nearly verging on it. Herdeby is situated in the parish of North Clifton on the Trent, in Nottinghamshire, five miles from Lincoln. The king is said to have founded a chantry in Herdeby chapel, which was afterwards removed by his son to Lincoln cathedral. Gough says, with respect to this chantry:—

The payment of ten marks is to this day made by the Dean and Chapter of the Cathedral to the curate of Herdeby chapel.

A monument with the queen's effigy at full length, of gilded brass, anciently formed the memorial of Queen Eleanora at Lincoln. This monument shared the fate of many others in the civil wars, but a fragment of the chapel in which it stood, is still remaining at the east end of the choir.

Shortly after the death of Queen Eleanora of Castile, died also her mother-in-law, Eleanor of Provence, the widow of Henry III. She died at Ambresbury, where she had lived a nun fifteen years. Her son being at that time in Scotland, her corpse was embalmed and remained long unburied. On his return the funeral took place with great pomp in Ambresbury monastery church. Her heart was deposited in the church of the Friars Minors, London. The memory of this queen is not free from blemish; and the common people have sometimes confused the accounts of the two queens, so as to ascribe to the virtuous and excellent Eleanora some of the actions of her mother-in-law. Perhaps there is scarcely a more eminent instance of a queen, who, living in troublesome times, and appearing so prominent as Eleanora did, owing to the share she took in her

husband's perils, has not only escaped every shadow of just reproach, but whose qualities have won for her such universal admiration and esteem among the historians of her reign. The mistaken ideas of the populace may be traced in a ballad called "A Warning against Pride, being the Fall of Queen Eleanora, wife of Edward I., of England, who for her pride sank into the earth at Queenhithe and rose again at Charing Cross, after killing the Lady Mayoress." This absurd story is founded on a quarrel between Eleanor of Provence and the City of London respecting Queenhithe.

Of the numerous family born to Edward I. and Queen Eleanora of Castile, two only reached middle life, and these were the unfortunate Edward II. and the nun-princess Mary.

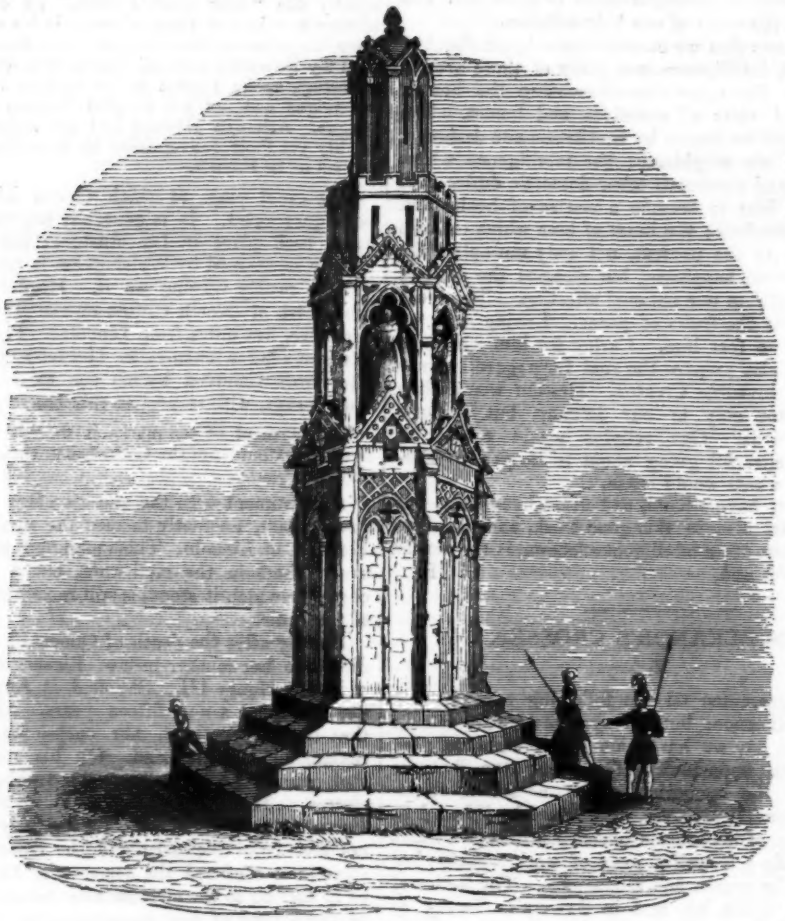
In concluding our account of Queen Eleanor's Crosses we may append some remarks from ancient authorities on the sites formerly occupied by some of these interesting structures. We mentioned the doubt as to whether Stamford should be admitted in the number of towns honoured by such a memorial. This doubt seems removed by the following extract from Butcher's account of the town, printed in 1646:—

Not far from High Dike, on the north side of the town of Stamford, near unto York highway, and about twelve score from the town gate, called Clement gate, stands an ancient cross of freestone, of a very curious fabric, having many scutcheons insculped in the stone about it, as the arms of Castile and Leon quartered, being the paternal coat of the King of Spain, and divers other hatchments belonging to that crown, which envious Time hath so defaced that only the ruins appear to my eye, and therefore are not to be described by my pen. This cross was called Queen's Cross, and erected by King Edward I. in memory of Eleanor his wife.

Also among the Harleian MSS. there is a memorandum in the pocket-book of a Mr. R. Symonds, who visited Stamford, county Lincoln, Aug. 23, 1645, of a large lofty cross standing on the hill "before ye come into the toune," with carved shields of England, Ponthieu, Castile and Leon.

Respecting the cross at Stoney Stratford, Dr. Stukely says that it stood "a little north of the Horse-shoe inn, pulled down in the rebellion." The same author adds that at Dunstaple in the centre of the four streets, intersecting at right angles, stood one of those beautiful crosses of Queen Eleanor. Also, that in the heart of the town of St. Albans stood one of Queen Eleanor's crosses, which the inhabitants entirely demolished; "not considering that such kind of antiquities invite many curious travellers to come thither."

According to Stowe "the great cross in West Cheape" nearly resembled the rest of the crosses, but "being by length of time decaied, John Hatherly, maior of London, procured in the year 1441 licence of King Henry VI. to re-edefie the same, in more beautiful manner, for the honour of the citie." But this re-edification was carried on with so little respect to the original intention, that the statues of the queen were converted into saints, and the whole edifice became illustrative of their history.



THE ORIGINAL CHARING-CROSS.

JOHN W. PARKER, PUBLISHER, WEST STRAND, LONDON